

REMARKS

Claims 1 and 3-21 are pending in this application. By this Amendment, claim 2 is cancelled without prejudice or disclaimer, claims 1, 5, 6, 8 and 14 are amended and claims 19-21 are added. Support for new claims 19-21 can be found in the original specification, including the claims and the figures. For example, see original claims 1-6. Reconsideration in view of the above amendments and following remarks is respectfully requested.

1. 35 U.S.C. §102(b)

A. Kita

The Office Action rejects claims 1, 3, 13, 14, 16 and 18 under 35 U.S.C. §102(b) as being anticipated by *Kita* (Japan Patent No. 1-265-454). The rejection is respectfully traversed.

The recitations of claim 2 have been incorporated into claim 1, rendering this rejection moot.

Therefore, Applicants respectfully submit that claim 1 is allowable. Claims 3, 13, 14, 16 and 18 depend from claim 1, and are allowable for at least the same reasons that claim 1 is allowable. Withdrawal of the rejection is respectfully requested.

B. Chu et al.

The Office Action rejects claims 1-18 under 35 U.S.C. §102(b) as being anticipated by *Chu et al.* (U.S. Patent No. 6,030,720, hereinafter referred to as "Chu"). The rejection is respectfully traversed.

The Office Action states that:

Chu et al. teaches a lithium-sulfur battery having an oxalate compound, e.g. dioxolane in combination with polyglycols such as polyglyme and additionally also including carbonates. See col. 14 line 33 et seq. and col. 4 line 25 et seq.

See page 2 of the Office Action dated February 23, 2006.

First, dioxolane is not an oxalate compound, and second, *Chu's* main solvent and cosolvent are not oxalate compounds, but rather both are similar to the organic solvents that are recited in addition to the oxalate compounds in claim 1, as disclosed in the present application.

Dioxolanes, as noted in Attachment A, are a group of organic compounds sharing a dioxolane ring structure with a chemical formula of $C_3H_6O_2$. On the other hand, oxalates, as noted in Attachment B, are salts or esters of oxalic acid, wherein an oxalate ion is $(COO)_2^{2-}$. Thus, dioxolanes are not oxalates - they have different chemical structures.

Chu discloses a main solvent of one or more of the lithium coordinating ionophores such as glymes, and a cosolvent, which can include dioxolane, propylene carbonate (PC), ethylene carbonate (EC), etc. See *Chu*, col. 14, lines 36-55. However, neither the main solvent nor the cosolvent of *Chu* read on the oxalate claimed in claim 1. Rather, the main solvent and the cosolvent of *Chu* are similar to the disclosed organic solvent of the present application. See, for example, paragraph [0044] of the present application which describes an organic solvent

which contains polyglyme and dioxolane. Also see paragraph [0045] which describes an organic solvent including carbonates.

For at least the reasons set forth above, Applicants respectfully submit that claim 1 is allowable. Claims 3-18 depend from claim 1, and are allowable for at least the same reasons that claim 1 is allowable. Withdrawal of the rejection is respectfully requested.

2. New Claims

New claims 19-21 have been added to the application. Applicants respectfully submit that for at least the reasons set forth above with respect to claim 1, as well as their own features, claims 19-21 are allowable.

3. Conclusion

Applicants invite the Examiner to contact Applicants' representative at the telephone number listed below if any issues remain in this matter, or if a discussion regarding any portion of the application is desired by the Examiner.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge
our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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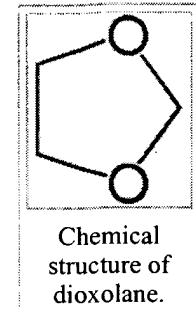


Dioxolane

From Wikipedia, the free encyclopedia

Dioxolane or **1,3-dioxolane** is an heterocyclic acetal with the chemical formula $C_3H_6O_2$. It is an analogue of tetrahydrofuran with an additional ring oxygen atom and an analogue of the 6 membered ring 1,3-dioxane. The isomeric 1,2-dioxolane analogue is classified as a peroxide. Dioxolane is used as a solvent and as a co-monomer in polyacetals.

Dioxolanes are a group of organic compounds sharing the dioxolane ring structure. Dioxolanes can be prepared by acetalization of carbonyl groups with ethylene glycol. (+)-*cis*-Dioxolane is the trivial name for L-(+)-*cis*-2-methyl-4-trimethylammoniummethyl-1,3-dioxolane iodide which is a muscarinic acetylcholine receptor agonist.



External links

- datasheet (<http://www.ferro.com/Our+Products/Fine+Chemicals/Products+and+Markets/1+3-Dioxolane/>)
- MSDS (<http://www.sigmapel.com/catalog/search/ProductDetail?ProdNo=184497&Brand=ALDRICH>)
- Datasheet cis-dioxolane (<http://www.sigmapel.com/catalog/search/ProductDetail?ProdNo=C008&Brand=SIGMA>)

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Categories: Organic compound stubs | Oxygen heterocycles | Acetals

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Oxalate

From Wikipedia, the free encyclopedia

The **oxalate** (also **ethanedioate**) ion is $(COO)_2^{2-}$ and is oxalic acid without the two hydrogen ions.

An **oxalate** (compound) (also **ethanedioate**) is a salt or ester of oxalic acid. Consumption of oxalates, through, for example, the grazing of animals on oxalate-containing plants such as greasewood, may result in kidney disease or even death.

Much of its other properties resemble oxalic acid.

Examples

- sodium oxalate, $Na_2C_2O_4$
- dimethyl oxalate, $(CH_3)_2C_2O_4$

See category for a list.

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Categories: Organic compound stubs | Carboxylate anions

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